



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB KIT 407M-07
Job Sheet 171579

SO 52110



Part No: RB KIT 407M-07

Job Qty: 8 pcs

Part Name: Gauge Pin

MAR 12 2018

DAS
13
9-89



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/5/18

Job Tracking No:

Due Date: 2/9/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea	2/9/18	2/9/18	0.00	0.00	Start Up Container		AT 18/03/18
100	Outsource	6 pcs	2/9/18	2/9/18	0.00	0.00	Outsource16		AT 18/03/18
110	Packaging	6 pcs	2/9/18	2/9/18	0.00	0.00	Packaging2		AP 18/03/18
120	QC	6 pcs	2/9/18	2/9/18	0.00	0.00	QC6		38
130	Packaging	6 pcs	2/9/18	2/9/18	0.00	0.00	Packaging3		MAR 23 2018
140	QC	6 pcs	2/9/18	2/9/18	0.00	0.00	QC21		GA090

Part Op 100 - 1-Issue P/O to KG Grinding; P/O 039202 (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3-Descriptions: Certificate of Conformity is required

DAS
21
9-89

MAR 28 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
GM32-192	Gauge Pin 0.06Ø	6 (1 ea)	100-Outsource	SO44661

GM24-194

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Outsource	GM32-192	3	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

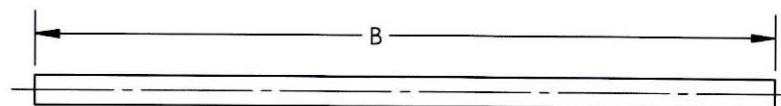
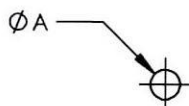
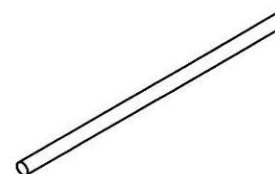
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date : _____	Step #: _____	MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval							
Description RB KIT 407M-07 Serial No/Batch: S052110 Revision: 03/16/18 Operation: 171579 Change No: 03/16/18		Positioned Wrong Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Drawing Finish Misread Turning Sequence							
Root Cause <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; vertical-align: top;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:50%; vertical-align: top;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; vertical-align: top;"> Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width:33%; vertical-align: top;"> Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width:33%; vertical-align: top;"> Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> </tr> </table>			Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐								
Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐							
OTHER : _____									

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REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
2	17-0085	-01 THRU -31 ADDED GUAGE PIN DIMENSIONS TABLE.			4/6/2017	RJC JAG

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 171579 MJS

18-02-05



GUAGE PIN DIMENSIONS		
PART NUMBER	ØA	B
-01	(Ø.0240)	1"
-03	(Ø.0400)	1"
-05	(Ø.0540)	1"
-07	(Ø.0600)	1"
-09	(Ø.0800)	1"
-11	(Ø.0960)	1"
-13	(Ø.1080)	1"
-15	(Ø.1200)	1"
-17	(Ø.1440)	1"
-19	(Ø.1440)	1/4"
-21	(Ø.1600)	1"
-23	(Ø.1600)	1/4"
-25	(Ø.1728)	1"
-27	(Ø.1728)	1/4"
-29	(Ø.1800)	1"
-31	(Ø.1920)	1"

-01 THRU -31
GUAGE PIN

DART AEROSPACE	
TITLE SPLINE MEASURING KIT ASSY	
DWG NO. RB KIT 407M-01 THRU -31	REV 2
MAT'L HEAT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	BELL 407
SCALE 4:1	DATE 12/7/2016 SHEET 2 OF 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039202

Supplier: AFF001-VC
Affutage K.G. Inc.
11455 Philippe Panneton Ave.
Montreal
QC
H1E 4M1 Canada
Phone: 514 323 0192 514 323 6631
Fax: 514 323 6631

PO No: PO039202
PO Date: 3/5/18
Due Date: 3/14/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

REVISED

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	170734	RBST4241-5	Roller ISSUE P/O: _____ TO KG GRINDING. MANUFACTURE AS PER DWG. SHIP QTY REQUIRED OF 89031009	Firmed	3/14/18	6 pcs	0 pcs <i>6x</i>	6 pcs <i>AT</i>	\$12.00/pcs	\$72.00
2	173095	RBST2854-5	Roller ISSUE P/O: _____ TO KG GRINDING. MANUFACTURE AS PER DWG. SHIP QTY REQUIRED OF 89031009 1 pin make 4 pcs	Firmed	3/14/18	26 pcs	0 pcs <i>26x</i>	26 pcs	\$12.00/pcs	\$312.00
3	170733	RBST1016-5	Roller ISSUE P/O: _____ TO KG GRINDING. MANUFACTURE AS PER DWG. SHIP QTY REQUIRED OF 89031009	Firmed	3/14/18	6 pcs	0 pcs <i>6x</i>	6 pcs	\$12.00/pcs	\$72.00
4	171045	RBST1007-5	Roller ISSUE P/O: _____ TO KG GRINDING. MANUFACTURE AS PER DWG. SHIP QTY REQUIRED OF 89031009 1 pin make 3 pcs	Firmed	3/14/18	6 pcs	0 pcs <i>6x</i>	6 pcs	\$12.00/pcs	\$72.00
5	RB KIT 407M-09	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	3 pcs	0 pcs <i>3x</i>	3 pcs	\$12.00/pcs	\$36.00	

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6	171579	RB KIT 407M-07	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	3 pcs	0 pcs	3 pcs	\$12.00/pcs	\$36.00
7	171585	RB KIT 407M-15	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	3 pcs	0 pcs	3 pcs	\$12.00/pcs	\$36.00
8	171588	RB KIT 407M-23	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 6 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	6 pcs	0 pcs	6 pcs	\$12.00/pcs	\$72.00
9	171587	RB KIT 407M-21	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	4 pcs	0 pcs	4 pcs	\$12.00/pcs	\$48.00
10	171577	RB KIT 407M-05	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	3 pcs	0 pcs	3 pcs	\$12.00/pcs	\$36.00
11	171581	RB KIT 407M-11	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	3 pcs	0 pcs	3 pcs	\$12.00/pcs	\$36.00
12	172345	RB KIT 407M-17	Gauge Pin 1-Issue P/O to KG Grinding; P/O _____ (Ship quantity req'd: 1 vial makes 4 pins) 2-Grind as per DWG. 3- Certificate of Conformity is required	Firmed	3/14/18	2 pcs	0 pcs	2 pcs	\$12.00/pcs	\$24.00

AFFUTAGE K.G. INC. K.G. GRINDING INC.

40 ans
Depuis 1975

11455 Ave. Philippe Panneton
Montréal, Québec
Canada, H1E 4M1
Tél. : 514-323-0192
Fax : 514-323-6631

Distributeur d'outils de coupe & Affutage sur mesure

Distributor of cutting tools & Custom tooling

BON DE LIVRAISON DELIVERY SLIP

DATE: MAR-14-2018

DART AEROSPACE

73005

P.O. # 39202

QTÉ	LIVRÉE	B/O	DESCRIPTION	PRIX UNITAIRE	TOTAL
6	(6)	-	RBST4241-5		
26	(26)	-	RBST2854-5		
6	(6)	-	RBST1016-5		
6	(6)	-	RBST1007-5		
3	(36)	-	BB KIT 407M-09		
3	(36)	-	" - 07		
3	(36)	-	" - 15		
6	(47)	-	" - 23		
4	(4)	-	" - 21		
3	(36)	-	" - 05		
3	(36)	-	" - 11		
2	(2)	-	" - 17		
				SOUS-TOTAL	
				TPS	
				TVQ	
				TOTAL:	

REÇU EN BONNE CONDITION / RECEIVED IN GOOD ORDER

www.kggrinding.com • sales@kggrinding.com